10/568081

SEQUENCE LISTING

<110> Temasek Life Sciences Laboratory

<120> NUCLEIC ACIDS FROM RICE CONFERRING RESISTANCE TO BACTERIAL BLIGHT DISEASE CAUSED BY XATHOMONAS SPP

<130> 2577-160

<160> 52

<170> PatentIn version 3.1

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<222> (1)..(5198)

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<213>   Oryza sativa

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IR24

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Gly Ala Glu Pro Cys Val Ala Leu Leu Leu Trp Leu Leu Gly Ala Ala
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<400> 12
agggatgtcg agatgagagc ttc   23

<210> 13

<211> 23

<212> DNA

<213> Artificial Sequence

<220>

<223> primer

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<400>  13
ggtgtccttc tttacgggcc tcc                                              23


<210>  14

<211>  21

<212>  DNA

<213>  Artificial Sequence



<220>

<223>  primer

<400>  14
gctgtgaagt gccgggtgtc c                                                21


<210>  15

<211>  21

<212>  DNA

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<220>

<223>  primer

<400>  15
tggacaggac gatgccggtg g                                                21


<210>  16

<211>  23

<212>  DNA

<213>  Artificial Sequence



<220>

<223>  primer

<400>  16
cccagcaagg ccatatcccg aca                                              23
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        <210>  17

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        <213>  Artificial Sequence


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        <223>  primer

        <400>  17
        tccccgcctt cgtctcgccg t                                              21


        <210>  18

        <211>  30

        <212>  DNA

        <213>  Artificial Sequence


        <220>

        <223>  oligonucleotide

        <400>  18
        aagcagtggt atcaacgcag agtacgcggg                                     30


        <210>  19

        <211>  57

        <212>  DNA

        <213>  Artificial Sequence


        <220>

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        <222>  (57)..(57)

        <223>  n = a, t, c, or g
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<210>  20

<211>  22

<212>  DNA

<213>  Artificial Sequence


<220>

<223>  primer

<400>  20
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<210>  21

<211>  23

<212>  DNA

<213>  Artificial Sequence


<220>

<223>  primer

<400>  21
aagcagtggt atcaacgcag agt                                             23


<210>  22

<211>  22

<212>  DNA

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<220>

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<400>  22
accttgcgtc gccctcctcc tg                                              22
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<210> 23

<211> 27

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<222> (49)..(49)

<223> n= a, t, c, or g

<220>

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<222> (27)..(27)

<223> n= a, t, c, or g

<400> 23
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<210> 24

<211> 23

<212> DNA

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<220>

<223> primer

<400> 24
ctcctcagca atggcggcag cga   23

<210> 25

<211> 45

<212> DNA

<213> Artificial Sequence

<220>

<223> primer

<400> 25
ctaatacgac tcactatagg gcaagcagtg gtatcaacgc agagt   45

<210> 26

<211> 22

<212> DNA

<213> Artificial Sequence

<220>

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<400> 26
ctaatacgac tcactatagg gc   22

<210> 27

<211> 24

<212> DNA

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<220>

<223> primer

<400> 27
acacacagat ccgtactcaa ctcc   24

<210> 28

<211> 38

<212>   DNA

<213>   Artificial Sequence

<220>

<223>   primer

<400>   28
gaccacgcgt atcgatgtcg actttttttt tttttttt   38

<210>   29

<211>   24

<212>   DNA

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<220>

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<400>   29
gagagcatca gagcaaagta ctcc   24

<210>   30

<211>   22

<212>   DNA

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<400>   30
gaccacgcgt atcgatgtcg ac   22

<210>   31

<211>   14

<212>   DNA

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<220>

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<221>  misc_feature

<222>  (1)..(1)

<223>  n = a, g, c, or t


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ntcgaswtsg wgtt                                                    14


<210>  32

<211>  16

<212>  DNA

<213>  Artificial Sequence


<220>

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<222>  (1)..(1)

<223>  n = a, g, c, or t


<220>

<221>  misc_feature

<222>  (11)..(11)

<223>  n = a, g, c, or t


<400>  32
ngtcgaswga nawgaa                                                  16
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<210>  33
<211>  16
<212>  DNA
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<220>
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<221>  misc_feature
<222>  (5)..(5)
<223>  n = a, g, c, or t


<220>
<221>  misc_feature
<222>  (10)..(10)
<223>  n = a, g, c, or t


<220>
<221>  misc_feature
<222>  (13)..(13)
<223>  n = a, g, c, or t


<400>  33
wgtgnagwan canaga                                          16

<210>  34
<211>  16
<212>  DNA
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<220>

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<220>

<221>   misc_feature

<222>   (1)..(1)

<223>   n = a, g, c, or t

<220>

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<222>   (11)..(11)

<223>   n = a, g, c, or t

<400>   34
ngtasaswgt nawcaa   16

<210>   35

<211>   16

<212>   DNA

<213>   Artificial Sequence

<220>

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<220>

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<222>   (5)..(5)

<223>   n = a, g, c, or t

<220>

<221>   misc_feature

<222>   (10)..(10)

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<223>  n = a, g, c, or t


<400>  35
agwgnagwan cawagg                                                    16


<210>  36

<211>  16

<212>  DNA

<213>  Artificial Sequence


<220>

<223>  primer

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<221>  misc_feature

<222>  (5)..(5)

<223>  n = a, g, c, or t


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<222>  (10)..(10)

<223>  n = a, g, c, or t


<220>

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<222>  (13)..(13)

<223>  n = a, g, c, or t


<400>  36
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<210>  37
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<211> 22

<212> DNA

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<220>

<223> primer

<400> 37
acgttgtaaa acgacggcca gt   22

<210> 38

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> primer

<400> 38
gtaatacgac tcactatagg gcga   24

<210> 39

<211> 21

<212> DNA

<213> Artificial Sequence

<220>

<223> primer

<400> 39
gagtcgacct gcaggcatgc a   21

<210> 40

<211> 23

<212> DNA

<213> Artificial Sequence

<220>

<223> primer

<400> 40
cttccggctc gtatgttgtg tgg   23

<210> 41

<211> 25

<212> DNA

<213> Artificial Sequence

<220>

<223> primer

<400> 41
gagcggataa caatttcaca cagga   25

<210> 42

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> primer

<400> 42
ttaggtgaga ctatagaata ctca   24

<210> 43

<211> 25

<212> DNA

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<220>

<223> primer

<400> 43
taacaacatg agaattacta atccg   25

<210> 44

<211> 23

<212> DNA

<213> Artificial Sequence

<220>

<223> primer

<400> 44
catgtatcca agttcgtagc tag   23

<210> 45

<211> 26

<212> DNA

<213> Artificial Sequence

<220>

<223> primer

<400> 45
ttggtttttt tgaatgaagg gtatat   26

<210> 46

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> primer

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<400>  46
aattcatgcc cacaagtaca gtac                                        24


<210>  47

<211>  24

<212>  DNA

<213>  Artificial Sequence



<220>

<223>  primer

<400>  47
ctgaaacaca ggaaaaatcc cgtt                                        24


<210>  48

<211>  24

<212>  DNA

<213>  Artificial Sequence



<220>

<223>  primer

<400>  48
tgcataggcc ctgtttagtt ctaa                                        24


<210>  49

<211>  1552

<212>  DNA

<213>  Oryza sativa



<220>

<221>  Xa31 promoter of IRBB31 allele (resistant allele)

<222>  (1)..(1552)

<223>
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<220>

<221>   Xa31 promoter of IRBB31 allele (resistant allele)

<222>   (1)..(1552)

<223>

<400>   49
gctgaaccaa acagttttag ctccatcgaa gaaaggagtt atactgattg gaatgctctc   60

acagtaaaaa aaacaaggaa gtagagctgg attttagaca gttctacaag aagttagaac   120

tctaccaaaa ttggaatttt ggatgatggt cttttaaaaa ctcgattgca ggaataaaat   180

tttacggctt gaaacttaca aaatgattag aaaagataac atgcctcagc gatttgtaaa   240

aaagtgaaca aataaaaatc tacaatacca ctaaactatt gctttatttt ggggacattg   300

cttaccattg aaaaaacaac taaccgtaaa tacgaacacc catatcaaat atactatcac   360

tgataaaata atcaattgta aattcaagca cacatattag tatagtactt taactcgatt   420

ggatagaaga aacctaacta atttaagcta tgcctcacaa caaaaaggta taaatttttt   480

aaggcttctt ttttttctt gcgtttgcta gtttatgctt ttaagatgtt tatacctttt   540

actcccctca ttcactgttt aaatacaatg ggaattagtg aaatcaatga gagttcaaac   600

ttcgaaacac tgaatacatg ttattctgga ttgaaatcaa atcgaatcag tcaaattcaa   660

ataggaggag gaacataggc attcttcctt tcttcagcgg gcaccattga attcagatac   720

tgcttcgcct agtctctgtc caagactcca cattttctga tggtgatggg gaactctgaa   780

actataggag gaagaataaa atgaagaatg cagaaatgaa tagtaatttg tgttttttaa   840

ttcttcttca attccacctt aggatccaac ttcagtccaa atccaaagta atgcaactgc   900

cactagatca ggctagagct tcaaattcaa ctccaaaaac ctccgtaaag tggcacacac   960

agaggaaaaa tcctggattc gtcactgccc atcaacatct gctttcgcct cccaattcct   1020

gctttctgaa atctgctttc gccgaattca tgccttcttg aattatgctt tcttagaccc   1080

tctttagatg ggactaaaac ttttactctc tatcacatcg gatgtttgga cactaattat   1140

aaatattaaa cgtagactat taataaaacc catctataat cttgtattaa ttcgcgagac   1200

gaatctattg agcctaatta atccatgatt agcctatgtg atgctataat aaacattctc   1260

taattataaa ttaattgggc ttaaaaaatt tgtctcgcgt attagctttc atttatataa   1320

ttagttttat aaatagtcta tatttaatac tctaaattag tgtctaaata cagggactaa   1380

agttaagtca ctggatccaa acaccaccta aggttttctt gtgtacttgt gaattgtggt   1440

tgactacgac tactagtgct ataaatagaa gaagagaccc atagagagca tcagagcaaa   1500

gtactcctaa aagacagcca cacacactga gacacccaag aagctgcctc ca   1552

<210> 50

<211> 541

<212> DNA

<213> Oryza sativa

<220>

<221> Xa31 3' regulation region of IRB31 allele (resistant allele)

<222> (1)..(541)

<223>

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gatctgtgtg tactgcattc ttgcttaatt agtgccctac acgttatgct ttcgaaacat   120

catctttttt cagtatagtt caataaattt cagctcaaat ttgtcctcca agacgagttc   180

tccatccaaa cgaaacttat ggtgttccgt tgtttgggcc gattttatat gttggaaatg   240

tacagacttc atagtactgt gtttcttttt tggaataagt tcaccagagg ttccttaact   300

taacggcgat attttttttag gtcctttaac cacaaaacca gaaatgtgca ccctaaact   360

ttcacaatcc gtgcacaaga ggtcctatgg cagtatacgt gggtggtttc gctgacgtga   420

catcctagtc agcaaaaata aataaataag taagtggggc ccatatgtaa gtgagagaaa   480

acgatgcggg ccccacatcc cttcttttc cccctttctt ctcctctcgt cttcttcgac   540

g   541

<210> 51

<211> 1583

<212> DNA

<213> Oryza sativa

<220>

<221> xa31 promoter of IR24 allele (susceptible allele)

<222> (1)..(1583)

<223>

<400> 51
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gctgaaccaa acagttttag ctccatcgaa gaaaggagtt atactgattg gaatgctcac    60

agttaaaaaa aacaaggaag tagagctgga ttttagacag ttctataaga agttagaact   120

ctaccaaacg gatagttaat tggaattttg gatgatggtc ttttaaaaac tcgattgcag   180

gaataaaatt ttacggcttg aaacttacaa aatgattaga aaagataaca tgcctcagcg   240

atttgtaaaa aagtgaacaa ataaaaatct acaataccac taaactattg ctttattttg   300

gggacattgc ttaccattga aaaaacaact aaccgtaaat acgaacaccc atgtcaaata   360

tactatcact gataaaataa tcaattgtaa attcaagcac acatattagt atagtacttt   420

aactcgattg gatagaagaa acctaactaa tttaagctat gcctcacaac aaaaaggtat   480

aaatttttta aggcttcttt tttttcttg cgttgctag tttatgcttt taagatgttt   540

atactttta ctcccctcat tcactgttta aatacaatgg gaattagtga aatcaatgag   600

agttcaaact tcgaaacact gaatacatgt tattttggat tgaaatcaaa tcgaatcagt   660

caaattcaaa taggaggagg aacataggca ttcttccttt cttcagcggg caccattgaa   720

ttcagatact gcttcgccta gtctctgtcc aagactccac attttctgat ggtgatgggg   780

aactctgaaa ctataggagg aagaataaaa tgaagaatgc agaaatgaat agtaatttgt   840

gttttttaat tcttcttcaa ttccaccta ggatccaact tcagtccaaa tccaaagtaa   900

tgcaactgcc actagatcag gctagagctt caaattcaac tccaaaaacc tccgtaaagt   960

ggcacacaca gaggaaaaat cctggattcg tcactgccca tcaacatctg ctttcgcctc  1020

ccaattcctg ctttctgaaa tctgctttcg ccgaattcat gccttcttga attatgcttt  1080

cttagaccct ctttagatga gactaaaact tttactctct atcacatcgg atgtttggac  1140

actaattata aatattaaac gtagactatt aataaaaccc atctataatc ttgtattaat  1200

tcgcgtgacg aatctattga gcctaattaa tccatgatta gcctatgtga tgctataata  1260

aacattctct aattataaat taattgggct taaaaaattt gtctcgcgta ttagctttca  1320

tttatgtaat tagttttata aatagtctat atttaatact ctaaattagt gtctaaatac  1380
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                                     79

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agggactaaa gttaagtccc tggatccaaa cgccacctaa ggttttcttg tgtacttgtg   1440

aattgtggtt tcttgtgtac ttgtgaattg tggttgacta cgactacgag tgctataaat   1500

agaagagacc aatagagagc atcagagcaa agtactccta aaagacagcc acacacactg   1560

agacacccaa gaagctgcct cca                                           1583
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<210> 52

<211> 541

<212> DNA

<213> Oryza sativa

<220>

<221> xa31 3' regulation region of IR24 allele (susceptible allele)

<222> (1)..(541)

<223>

<400> 52
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ttctcctccg tgtccggtgg tcatcttctt ctccgtgctt ttgctctgga gttgagtacg    60

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catctttttt cagtatagtt caataaattt cagctcaaat ttgtcctcca agacgagttc   180

tccatccaaa cgaaacttat ggtgttccgt tgtttgggcc gattttatat gttggaaatg   240

tacagacttc atagtactgt gtttcttttt tggaataagt tcaccagagg ttccttaact   300

taacggcgat attttttag gtcctttaac cacaaaacca gaaatgtgca cccctaaact   360

ttcacaatcc gtgcacaaga ggtcctatgg cagtatacgt gggtggtttc gctgacgtga   420

catcctagtc agcaaaaata aataaataag taagtggggc ccatatgtaa gtgagagaaa   480

acgatgcggg ccccacatcc cttctttttc cccctttctt ctcctctcgt cttcttcgac   540

g                                                                  541
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